REMARKS

Status of the Claims

Claims 1-8 are pending in this application.

Claims 1-5 are rejected.

Claims 6-8 have been added

Claim 1 has been amended. Support for these amendments can be found throughout the specification, claims, and drawings, as originally filed.

Rejection of Claims 1-5 Under 35 U.S.C. § 112

Claims 1-5 stand rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject mater which Applicant regards as the invention.

Applicant respectfully traverses the 35 U.S.C. § 112 rejection of claims 1-5. The Office Action indicated that claims 1-5 contained the phrase "said first casting...into the mold" which was indicated by the Office Action to be indefinite because it is idiomatically incorrect. Applicant has reviewed the claims and has amended them to remove the language pertaining to the word "casting" and has clarified it to recite "injection molding". Removal of the rejection of claims 1-5 in view of the claim amendments is respectfully requested.

Rejection of Claims 1-5 Under 35 U.S.C. § 102(b)

Claims 1-5 stand rejected under 35 U.S.C. §102(b) as being clearly anticipated by JP 63-318173 (hereafter JP '173). The Applicant respectfully traverses the 35 U.S.C. § 102(b) rejection of claims 1-5 as being anticipated by JP 173.

The Office Action indicated that JP '173 discloses the claim processes evidenced by the abstract in Figs. 1-3. JP '173 discloses installing a light-emitting or photo detecting pellet (3) on a lead pin (1a). Once the pellet (3) is installed, injection molding is used to form a lens section (12a). See abstract. There is nothing in the abstract of JP '173 that discloses a first injection molding step and a second injection molding step as required by rejected claims 1-5. The abstract of JP '173 discloses wire bonding the pellet (3) to the lead pin (1b) which is not a first injection molding step. Therefore, for this reason, Applicant does not believe that JP '173 anticipates claims 1-5 of the present application.

In further regard to rejected claims 1-5, Applicant maintains that the rejected claims have been amended to specify that during the first injection molding step "an intermediate stage LED having a cone shaped surface and one or more lateral surfaces" is formed. See amended claim 1 of the present application. Claims 1-5 have also been amended to specify that the cone shape "...causes the second flowable material to flow into said final LED mold tangentially to said intermediate LED." See amended claim 1. Nothing in JP '173 discloses forming a cone shaped intermediate LED during a first injection molding step and then a second injection step where the cone shape of the intermediate LED causes the material to flow tangentially. For these

reasons, Applicant further maintains that claims 1-5 of the present application are not anticipated by JP '173. Removal of the rejection is respectfully requested.

Furthermore, Applicant maintains that JP '173 would not render the claims of the present application obvious. The claims of the present application are process claims which describe a process for flowing material into an LED mold to form a homogenous plastic body that exhibits no refraction of light in the region of a former parting line between the intermediate stage LED and the final LED. There is nothing in JP '173 that teaches or suggests how the material flows into the mold during the second injection molding step. Furthermore, there is nothing in JP '173 that teaches or suggests an intermediate stage LED having a cone shape with one or more lateral surfaces. For these reasons, Applicant maintains that JP '173 would not render the claims of the present application obvious.

Rejection of Claims 1-5 Under 35 U.S.C. § 102(b)

Claims 1-5 stand rejected under 35 U.S.C. §102(b) as being clearly anticipated by JP 2000-223748 (hereafter JP '748). Applicant respectfully traverses the 35 U.S.C. §102(b) rejection of claims 1-5. The Office Action indicated that JP '748 discloses the claimed process as evidenced by the abstract in Figs. 1-3. JP '748 discloses a method of manufacturing an LED lamp that includes a primary case molding step to form an inner case (6) and a second case molding step for forming an outer case (7). The figures show portions of the lead frame (2) and (3) being molded partially in the inner case (6). The inner case has a rectangular shape which is then molded into the second case (7). Claims 1-5 of the present application have been amended to specify that

during the first injection molding step "an intermediate stage LED having a cone shaped surface and one or more lateral surfaces" is formed. See amended claim 1 of the present application. Furthermore, claims 1-5 have been amended to specify that the cone shape "...causes the second flowable material to flow into said final LED mold tangentially to said intermediate LED." See amended claim 1. Nothing in JP '748 discloses the inner casing (6) as having a cone shape. Furthermore, there is nothing in JP '748 that discloses how the material in the second injection molding step flows into the cavity, much less whether or not it flows tangentially with respect to the first casing. Therefore, Applicant maintains that independent claim 1 and dependent claims 2-5 which depend from independent claim 1 as well as new claims 6-8 which depend upon independent claim 1 are allowable in view of JP '748. Removal of the rejection is respectfully requested.

JP '748 would also not render the claims of the present application obvious. The claims of the present application are process claims which describe a process for flowing material into a LED mold to form a homogeneous plastic body that exhibits no refraction of light in the region of a former parting line between the intermediate stage LED and the final LED. There is nothing in JP '748 that teaches or suggests how the material flows into the mold during the second injection molding step. Furthermore, there is nothing in JP '748 that teaches or suggests an intermediate stage LED having a cone shape with one or more lateral surfaces. For these reasons, Applicant believes that JP '748 would not render the claims of the present application obvious.

Rejection of Claims 1 and 3-5 Under 35 U.S.C. § 102(b)

Claims 1 and 3-5 stand rejected under 35 U.S.C. §102(b) as being clearly anticipated by JP 63-129680 (hereafter JP '680). Applicant respectfully traverses the 35 U.S.C. §102(b) rejection of claims 1 and 3-5. The Office Action maintains that JP '680 teaches the claimed processes as evidenced by the abstract and Figs. 1-3. Applicant has reviewed the reference and respectfully traverses the rejection.

Claims 1 and 3-5 of the present application require two injection molding steps using a first flowable material and a second flowable material. See claim 1 of the present application. To the contrary JP '680 discloses a first low pressure injection molding step that encloses the tip part of the metal frame (1). See abstract. Then in a second injection molding step the same resin as that from the first step is injected. Id. Therefore, for this reason alone claims 1 and 3-5 of the present application are not anticipated by JP '680 since two different materials are injected in the claimed invention while JP '680 discloses only the use of the same material in both injection molding steps. For this reason alone, the rejection should be removed.

In further regard to claims 1 and 3-5 these claims indicate that during the first injection molding step an intermediate stage LED is formed that has a cone shape surface and one or more lateral surfaces. See claim 1 from which claims 3-5 depend. The intermediate stage LED is placed in the final LED mold "...on the mold bottom" and during the second injection molding step the cone shaped intermediate stage LED "causes the second flowable material to flow in said final LED mold tangentially to said intermediate LED." See claim 1 from which claims 3-5 depend. JP '680 discloses a first injection molding step that encloses the metal from (1) with what appears to be a semi-

circular shaped mold. There is no disclosure of a cone shaped surface with one or more lateral surfaces as required by rejected claims 1 and 3-5 of the present application. Furthermore, JP '680 discloses placing the first injection molded product in the middle of the final mold and does not disclose placing it on the bottom of the mold as specified by rejected claims 1 and 3-5 of the present application. See abstract. For this reason, Applicant maintains that JP '680 does not anticipate rejected claims 1 and 3-5 of the present application. Removal of the rejection is respectfully requested.

Rejection of Claims 1 and 3-5 Under 35 U.S.C. § 102(b)

Claims 1 and 3-5 stand rejected under 35 U.S.C. §102(b) as being clearly anticipated by JP 64-69020 (hereafter JP '020). Applicant respectfully traverses the 35 U.S.C. § 102(b) rejection of claims 1 and 3-5. The rejected claims in pertinent part state "said intermediate stage LED is arranged in the final LED mold with a rear of the intermediate stage on the mold bottom, and an annular channel is formed between an inner side wall region of the final LED mold and the one or more lateral surfaces of the intermediate stage LED..." See claim 1. JP '020 does not disclose placing the intermediate stage LED in the bottom of the final LED mold as required by the claims of the present application. JP '020 discloses a first injection molding step wherein the head section having a lens face is formed. See abstract. Then during a second injection molding step a body section is formed integrally under the head section. See abstract. The figures clearly show that in the first injection molding step the top of the final LED component is formed. Then in the second injection molding step the intermediate stage LED is not placed at the bottom of the final LED mold because the

body portion of the LED is formed under the intermediate stage LED. For this reason, Applicant maintains that rejected claims 1 and 3-5 are not anticipated by JP '020.

Applicant also maintains that claims 1 and 3-5 are further distinguishable from JP '020 because the pending claims disclose a first injection molding step for forming an intermediate stage LED that has "a cone shaped surface and one or more lateral surfaces." See claim 1 from which claims 3-5 depend. As shown in JP '020 the product of the first injection molding step is clearly not cone shaped. Instead a semi-circular domed-shaped type of structure is formed.

Furthermore, Applicant maintains that JP '020 would not render the claims of the present application obvious. The claims of the present application are process claims which describe for flowing material into an LED mold to form a homogenous plastic body that exhibits no refraction of light in the region of a former parting line between the intermediate stage LED and the final LED. There is nothing in JP '020 that teaches or suggest how the material flows into the mold during the injection molding steps. Additionally there is nothing in JP '020 that teaches or suggests an intermediate stage LED having a cone shape with one or more lateral surfaces. For these reasons, Applicant believes that JP '020 would not render the claims of the present application obvious.

Rejection of Claims 1 and 3-5 Under 35 U.S.C. § 102(b)

Claims 1 and 3-5 stand rejected under 35 U.S.C. §102(b) as being clearly anticipated by JP 64-69019 (hereafter JP '019). The Applicant respectfully traverses the 35 U.S.C. § 102(b) rejection of claims 1 and 3-5.

JP '019 discloses a two step method of injection molding an LED. The first step involves forming a secondary sealing body which encases the electrical components of an LED in a first mold. Then the primary sealing body (19) is placed in a second mold where a second resin in injected to form a second sealing body (24). See abstract and Figs. 1-7. Claims 1-5 have been amended to specify that during the first injection molding step "an intermediate stage LED having a cone shaped surface and one or more lateral surfaces" is formed. See amended claim 1 of the present application. Furthermore, claims 1-5 have been amended to specify that the cone shaped intermediate stage LED "...causes the second flowable material to flow into said final LED mold to tangentially to said intermediate LED." See amended claim 1. Nothing in JP '019 discloses how the material in the second injection molding step flows into the cavity. The abstract of JP '019 and drawings do mention a projection (22), however, there is no mention of tangentially flowing the second flowable material into the final LED mold. Therefore Applicant maintains that claims 1 and 3-5 of the present application are allowable in view of JP '019.

Furthermore, Applicant maintains that JP '019 would not render the claims of the present application obvious. The claims of the present application are process claims which describe a process of flowing material into a LED mold to form a homogenous plastic body that exhibits no refraction of light in the region of a former parting line between the intermediate stage LED and the final LED. There is nothing in JP '019 that teaches or suggests flowing the second flowable material into the final LED mold tangentially to the intermediate stage LED that is caused by a cone shape of the primary sealing body (19). The drawings of JP '019 do not disclose a primary sealing

body (19) that has a cone shape. For these reasons, Applicant believes that JP '019 would not render the claims of the present application obvious.

Rejection of Claim 2 Under 35 U.S.C. § 103

Claim 2 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over JP-63-129680. The Applicant respectfully traverses the 35 U.S.C. § 103(a) rejection of claim 2.

Applicant argues that JP '680 would not render the claims of the present application obvious. The claims of the present application are process claims which describe a process for flowing material into the LED to form a homogenous plastic body that exhibits no refraction of light in the region of a former parting line between the intermediate stage LED and the final LED. There is nothing in JP '680 that teaches or suggest how the material flows into the mold during the injection molding step. Additionally, there is nothing in JP '680 that teaches or suggests an intermediate stage LED having a cone shape with one or more lateral surfaces. For this reason, Applicant believes that JP '680 would not render the claims of the present application obvious.

CONCLUSION

It is respectfully submitted that in view of the above amendments and remarks that claims 1-5 and new claims 6-8 which either depend indirectly or ultimately upon independent claim, as presented, are patentably distinguishable because the cited patents, whether taken alone or in combination, do not anticipate or render obvious, the

claims of the present invention. Therefore, Applicant submits that the pending claims are properly allowable, which allowance is respectfully requested.

The Examiner is invited to telephone the Applicant's undersigned attorney at (248) 364-4300 if any unresolved matters remain.

Respectfully submitted,

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Dated: September 13, 2006 By: _____

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